

REMARKS

Further and favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

I. Telephonic Interview

Applicants appreciate the courtesies extended to Applicants' attorney by Examiner Buie during the telephonic interviews held May 19, 2010 and June 4, 2010. The Examiner considerably agreed to allow applicants to submit a supplemental amendment before issuing another Office Action.

II. Claim Amendments

Claims 12, 14, 15, 16, 21 and 22 are pending in this application.

Claims 12 and 14 have been amended to recite a "copolymer" consisting of a partially hydrolyzed polyvinyl alcohol having an average polymerization degree of 300 to 500 and a polymerizable vinyl monomer in a weight ratio of 6:4 to 9:1. Accordingly, claims 12 and 14 are directed to a copolymer rather than a composition. Further, claims 12 and 14 have been amended to recite "the polymerizable vinyl monomer consists of acrylic acid and methyl methacrylate combined in a weight ratio of 3:7 to 0.5:9.5 in the copolymer". Support for these amendments can be found on page 4, lines 1-7 and 20-24, and page 15, lines 1-10 of the substitute specification filed February 10, 2006.

Claim 22 has been amended to correspond with the amendments to claim 14.

New claims 28 and 31 have been added to recite a composition comprising the copolymer of claim 14 or 12, respectively, "and a medicine, animal drug, agricultural chemical, fertilizer or food component". Support for these amendments can be found on page 16, lines 6-13 of the substitute specification.

New claim 30 corresponds with amended claims 12 and 22.

New claims 29 and 32 correspond with claims 15 and 21, which have been cancelled.

Support for new claim 33 can be found on page 9, line 24 - page 10, line 13 of the substitute specification.

III. Claim Objection

The Examiner objects to claim 12 under 37 CFR 1.75(c) as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claim 12 has been amended into an independent claim. Accordingly, reconsideration and withdrawal of the objection are respectfully requested.

IV. Claim Rejections Under 35 U.S.C. § 102

The Examiner rejects claims 14, 21 and 22 under 35 U.S.C. § 102(a) as being anticipated by Hoshi et al. (US 2003/0166763); and rejects claim 16 under 35 U.S.C. § 102(a) as being anticipated by Hoshi et al. As applied to the amended claims, Applicants respectfully traverse the rejections.

The Examiner states that the composition of claim 14 has the transitional phrase “comprising”, which is open-ended and does not exclude additional, unrecited elements (see Office Action, page 9, item C).

The transitional phrase **“consisting of”** excludes any element, step, or ingredient not specified in the claim (see MPEP 2111.03). Claim 14 has been amended to recite “[a] copolymer **consisting of** a partially hydrolyzed polyvinyl alcohol having an average polymerization degree of 300 to 500 and a polymerizable vinyl monomer in a weight ratio of 6:4 to 9:1”. Accordingly, the copolymer of claim 14 consists of a partially hydrolyzed polyvinyl alcohol having **an average polymerization degree of 300 to 500**, and a polymerizable vinyl monomer in a weight ratio of 6:4 to 9:1, and thus excludes any other element or ingredient.

Synthesis Example 2 of the Hoshi et al. reference discloses a copolymer comprising (1) a **mixture of PVA-SH** having a polymerization degree of **500 and 1500** (a mixture of 50:50, 45:55, 40:60, 20:80 or 10:90 of 500 and 1500), and (2) acrylic acid and methyl methacrylate (see paragraph [0055] and Table 2).

Further, the reference discloses in Synthesis Example 4, a copolymer comprising (1) a **mixture of PVA** having a polymerization degree of **500 and 1700** (a mixture of 50:50, 45:55, 40:60, 20:80 or 10:90 of 500 and 1700), and (2) acrylic acid and methyl methacrylate (see paragraph [0059] and Table 4).

The reference does not disclose a copolymer consisting of a partially hydrolyzed polyvinyl alcohol having an average polymerization degree of 300 to 500, because the reference teaches a mixture of PVA-SH having a polymerization degree of 500 and 1500 and a mixture of PVA having a polymerization degree of 500 and 1700. A mixture of “500 and 1500” and “500 and 1700”, in the mixing ratios disclosed in the reference, has an average polymerization degree which is clearly outside the range of “300 to 500”, as recited in claim 14.

Therefore, claim 14 is not anticipated by the reference.

Claims 16 and 22 depend from claim 14, and thus also are not anticipated by the reference.

Claim 21 has been cancelled, rendering its rejection moot.

Accordingly, reconsideration and withdrawal of the rejections are respectfully requested.

V. Claim Rejection Under 35 U.S.C. § 103

The Examiner rejects claims 12, 14, 15, 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over Angel et al. (US 2002/0042466). As applied to the amended claims, Applicants respectfully traverse the rejection.

As discussed above, the transitional phrase “consisting of” excludes any element, step, or ingredient not specified in the claim. Claims 12 and 14 recite a copolymer consisting of a partially hydrolyzed polyvinyl alcohol having an average polymerization degree of 300 to 500 and a polymerizable vinyl monomer in a weight ratio of 6:4 to 9:1.

Angel et al. disclose a copolymer of (a) hydroxyl-C₁-C₆-alkyl (meth)acrylate, (b) polyvinyl alcohol (the degree of polymerization is from 227 to 2270), and (c) a polymerizable compound, such as acrylic acid and methyl methacrylate (see Abstract and claim 1 of the reference). Thus, the copolymer of the reference includes hydroxyl-C₁-C₆-alkyl (meth)acrylate as an essential component.

On the other hand, the copolymers of claims 12 and 14 are limited to a partially hydrolyzed polyvinyl alcohol having an average polymerization degree of 300 to 500 and a polymerizable vinyl monomer in a weight ratio of 6:4 to 9:1. Accordingly, the copolymers of claims 12 and 14 do not contain hydroxyl-C₁-C₆-alkyl (meth)acrylate, and thus are completely different from the copolymer disclosed in the reference.

Therefore, claims 12 and 14 would not have been obvious over the reference.

Claim 22 depends from claim 14, and thus also would not have been obvious over the reference.

Claims 15 and 21 have been cancelled, rendering their rejection moot.

VI. New Claims

New claims 28-33 depend directly or indirectly from claims 12 or 14. Thus, these claims are distinguished over the applied references for the reasons discussed above with respect to claims 12 and 14, and in view of the additional features recited in each claim. Accordingly, prompt examination and allowance of claims 28-33 are respectfully requested.

VII. Conclusion

For these reasons, Applicants take the position that the presently claimed invention is clearly patentable over the applied references.

Therefore, in view of the foregoing amendments and remarks, it is submitted that the objection and rejections set forth by the Examiner have been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

Makoto NOAMI et al.

By _____
**/Andrew B.
Freistein/**

Digital signature by /Andrew B. Freistein/
DNI certifies Andrew B. Freistein, o-NLP,
andNLP.com<mailto:NLP.com@andNLP.
com>c-US
Date: 2010/06/08 13:52:31 +00'00'

Andrew B. Freistein
Registration No. 52,917
Attorney for Applicants

ABF/emj
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
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